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I. *Description of Mexican Ants noticed in the American Naturalist, April, 1868.*

BY EDWARD NORTON.

[Communicated April 6, 1868.]

Camponotus (Formica) esuriens Smith.

SMITH, British Museum Catalogue. Hymenoptera. VI, p. 54, No. 196, 1858. Major and minor workers. Mexico.

Mr. Smith describes the two workers. I find among my specimens the worker major, the male, and female.

The worker major agrees with Mr. Smith's description; the ocelli are wanting.

Female. Length, 0.50 in. Face below ocelli black; the radicle of antennæ, lower margin of face, and greater part of mandibles ferruginous; mesothorax and scutel with variable piceous, or pitch-colored spots. Declivity of metathorax abrupt; node depressed, almost truncate above; abdomen black; wings hyaline; veins ferruginous.

Male. Length, 0.28-32 in. The head, mesothorax, and abdomen piceous black. Nasus, remainder of thorax, node, and legs piceous; trochanters yellowish. Node truncate, slightly emarginate; ocelli prominent and separated.

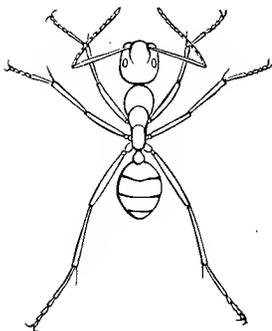
COMMUNICATIONS ESSEX INSTITUTE, VOL. VI. 1 JULY, 1868.

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WILLIAM L. BROWN

Camponotus (F.) fulvaceus Norton (nov. sp.).

Worker major. Length, 0.30–32 in. Color ochre-yellow. Scape black; flagellum, mandibles, a band near the apex of each segment of abdomen, and the legs below the apex of femora piceous. Apex of antennæ yellowish. A carina down the nasus; ocelli wanting. Head subquadrate, slightly hollowed behind. Thorax compressed behind, declivity not abrupt; node rounded, moderate. Body covered with long, scattered, pale hairs. The head is somewhat wider than the thorax.



Worker minor. Length, 0.30 in. The head of this form is nearly as large, but is slenderer, and is more rounded behind the eyes. (Four major workers; two minor workers.)

Camponotus (F.) nitidus Norton (nov. sp.).

Worker. Length, 0.25 in. Piceous black, slender, polished, shining. Antennæ ferruginous, each set in a larger basin near to a very short inner carina or ridge; nasus not distinctly carinate, with a deep hollow on each side at base of mandibles; a slender impressed line down the middle of face. Mandibles striate, rufous. Head about one-third wider than thorax, not emarginate behind. Thorax compressed, declivity abrupt; node rounded, flat behind. Abdomen polished, margin of segments pale, legs rufous. A few scattered hairs on the face, none on the body. (Three workers.)

In this and the next, the legs are not as long as in the two previous species.

Camponotus (F.) nacerdus Norton (nov. sp.).

Worker. Length, 0.22. Dull black; the face below the antennæ rufous. The whole body slender, dull black,

with delicate punctures. (Antennæ wanting.) Head subquadrate, hardly emarginate and truncate behind, corners distant. Eyes subovate, small. Face not rugose; a distinct ridge down the nasus, continuing an impressed line above. The whole face below the antennæ rufous. Thorax compressed behind; node rounded, not thickened, flattened behind. Abdomen dull black, covered with a silky pile, visible in certain lights. Head and body with a few scattered long hairs. Legs piceous black, the anterior larger than the others. (Two workers.)

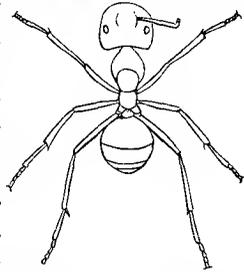
This is somewhat like the *F. corusca* of Smith.

Camponotus (Tapinoma) piceatus Norton (nov. sp.).

Worker major. Length, 0.20 in. Color entirely reddish piceous. Antennæ pale. A carina on the nasus, an impressed line above. Head one half wider than thorax, square, not hollowed behind, and, with the thorax, dull with delicate punctures. Thorax compressed behind, declivity abrupt, incisures distinct. Node rounded, convex behind, so as to fit closely into the concavity of abdomen. Abdomen shining, not polished, base of segments darker, apex narrowly margined with pale gold. Body covered with sparse whitish hair. Legs shorter than in those of the previous genus. (Five workers.)

Camponotus (T.) tomentosus Norton (nov. sp.).

Worker major. Length, 0.28 in. Dull blackish, with ferruginous tints; the abdomen sericeous, with a greenish pile. Head quadrate, large, nearly twice as wide as abdomen, dull, with dense fine punctures; eyes small, subovate; antennæ black, inserted beneath the raised inner carina which partly overlaps the radicle; nasus hardly carinate; mandibles wide, with about three inner teeth, outer tooth sharp. Thorax narrowed behind, faintly ferruginous. Node rounded, slightly convex behind, rather large. Abdomen black, the apical margins of segments narrowly polished, golden, the node and abdomen closely covered with shin-



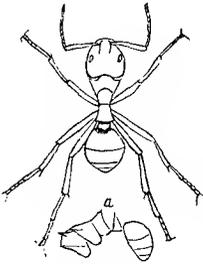
ing yellowish green hair. Legs black, and with the body sparsely covered with short pale erect hair.

Worker minor. Length, 0.22 in. The head about half the size of the preceding, slightly wider than thorax, somewhat rounded and scarcely emarginate behind; mandibles formed as in the major workers, but not so wide. (Four majors; three minor workers.)

Monacis bupinosa?

Polyrhachis arboricola Norton (nov. sp.).

Worker major. Length, 0.20 in. Color dull black; form short and stout. Head nearly twice as wide as thorax, deeply emarginate behind, distinctly and closely punctured; eyes round. Antennæ inserted below the line of eyes; joints of flagellum incised, basal radicle and flagellum ferruginous. Thorax with a strong spine on each side before, middle lobe prominent, quadrate, with distinct edges; metathorax subtriangulate, widest behind, with sharp angulate corners, but no spines, abrupt on all sides. Node oval, emarginate, with one sharp spine on the summit. Abdomen almost round, covered with abundant silky hair, the whole body with long whitish hair. Anterior legs below the knees piceous.



Holeoponera

Polyrhachis strigata Norton (nov. sp.).

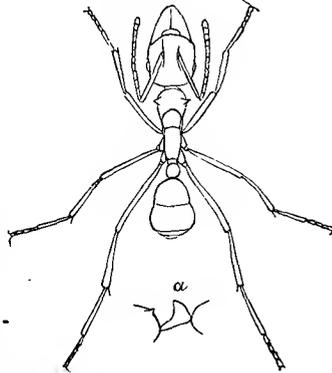
Worker major. Length, 0.16 inch. Color black, the antennæ and legs honey-yellow. Antennæ inserted low down the face, widely separated. Head rounded behind; eyes round. Mandibles rufous, triangular. Thorax ovate, contraction behind gradual, separation of lobes indistinct. Node nearly spherical; basal segment of abdomen as long and wide as the next. The whole body from nasus to anal segment covered with coarse longitudinal striæ; they pass around the node, the circles diminishing to the summit. Legs short, pale at joints; femora and tibiæ swelled in middle.

Var. Color wholly ferruginous. The antennæ and legs honey-yellow.

Ectatomma ferrugineus Norton (nov. sp.).

Worker major. Length, 0.40 in. Color ferruginous; mandibles yellowish. Eyes round, widely separated.

Head longitudinally rugose, basin of antennæ very large, touching the eyes and extending to top of head; three carinæ between the antennæ, down the face; between these, over the insertion of antennæ are two shining tubercles. Mandibles with fine striæ. Head transverse behind. Thorax advanced, with a sort of tubercle before, and a short stout spine at each corner;



scutum large and circular, with two tubercles on each side, one on mesothorax, and one on the adjoining piece, or parapsides; two short separated spines on the declivity of metathorax; the pro and mesothorax with circular and longitudinal, the remainder with transverse coarse striæ. Node subquadrate, prominent before, truncate above, with circular striæ; first segment canaliculate through the middle, with delicate diverging striæ; a deep incision between this and the next segment, which is covered with very fine diverging striæ; apex of following segments shining. Hinder tibiæ and tarsi each one-third longer than those preceding; claws with a small inner tooth near the middle.

Male. Length, 0.40 in. Color piceous, varying to black. Antennæ set in a line with the bottom of eyes, the summit of the basin in a line with top of eyes; scape short, about half as long as third article. Back of head truncate, about one-third narrower than at eyes. Prothorax distinct. Mesothorax trilobate as in *Tenthredo*, rounded before, thorax with numerous longitudinal striæ, running (seen from behind) from the right down to the left side. Node rounded, transversely striate, with a short spine on each side before. Abdomen as in the

workers, the striæ finer and remaining segments delicately punctured. The whole body more or less sericeous with fine whitish hair. Wings as in *E. tuberculata*. Claws bifid. (Four workers, one male.)

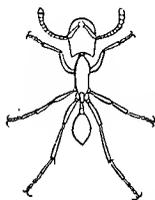
Eciton brunnea Norton (nov. sp.).

Worker minor. Length, 0.37 in. Color of head and thorax black, metathorax indistinctly ferruginous. Abdomen and legs from honey-yellow to ferruginous. Head narrower and mandibles broader than in *E. Mexicana*. Eyes rather larger. Basin of antennæ surrounded by a carinæ, except on upper side; an impressed line down the face. Mandibles with a distinct inner tooth, and their basal half finely denticulate. Head narrowed behind, with a short bent spine on back of the hinder angles. A distinct flattened space with subangulate margin down the thorax, ending in middle of metathorax in two spines; a single sharp spine beneath first node bent backwards, and a tooth on apex of second node beneath pointing forward. Abdomen ovate, wholly yellow-red. The whole insect sprinkled with pale hair. Claws with a single inner tooth near the middle. (Five specimens.)

This is more like *E. rapax* Smith, than any other species known to me.

Eciton Sumichrastii Norton (nov. sp.).

Worker minor. Length, 0.15-17 in. Black; antennæ, abdomen, and legs, reddish piceous. Head one-half wider than thorax, somewhat contracted behind, deeply emarginated, with sharp slightly recurved angles. Antennæ somewhat clavate. Mandibles short and stout; eyes minute. The whole head and thorax covered with large deep pits, rather confluent longitudinally upon the last. Sutures between parts of thorax distinct. Nodes of peduncle of equal size, the first coarsely punctured; no spines beneath; abdomen shining, polished. The whole body sprinkled with pale hair, most abundant on abdomen. All the tibial spines pectinate. Claws simple. (Seven specimens.)

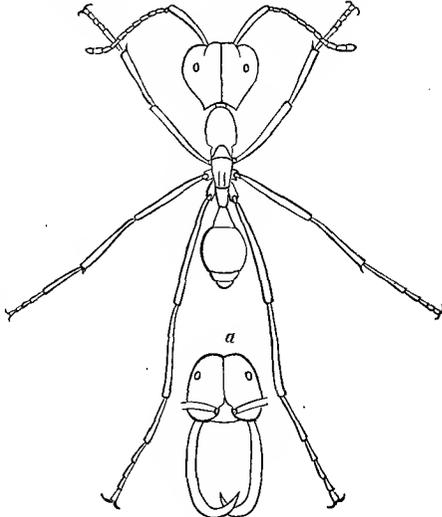


***Eciton Mexicana* Roger.**

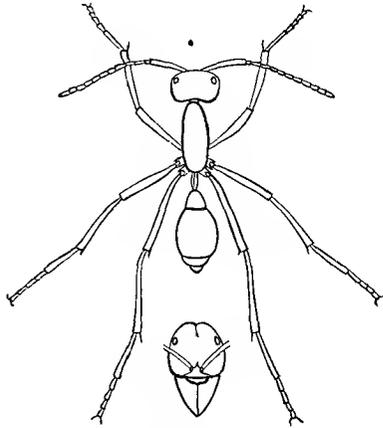
ROGER, Berliner entomologische Zeitschrift, 1863, sp. 97.

Worker major.
Length, 0.50 in.*Worker intermedia.* Length, 0.40 in.*Worker minor.*
Length, 0.25–0.35 in.

The worker major has long smooth sickle-shaped mandibles (fig. *a*). Mandibles of the other workers as usual; their surface smooth, biting edge without teeth. Eyes pearly white, small, angles at back of head, not acute; spinose projections on each side of metathorax distinct. First node of abdomen nearly as wide as long. Joints of flagellum rather long and slender. Head dull, not polished; color of head in major worker creamy white; of abdomen blackish, remainder of body ferruginous; color of second series ferruginous, abdomen black; of third series, black with the flagellum and tarsi ferruginous. This so closely resembles *E. hamata* Fab., that it is thought by many to be identical with it.



Worker major.



Worker minor.

***Pachyeondyla Orizabana* Norton (nov. sp.).**

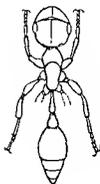
Worker. Length, 0.37. Color dull black, with the radicle and apex of antennæ, mandibles, and legs below tips of knees, ferruginous. Head subquadrate, long, emarginate behind; eyes small, round, placed below the middle of face. Antennæ inserted below the line of eyes, their basin small. Mandibles polished, with a few punctures near the teeth; teeth numerous. Head and thorax with somewhat confluent longitudinal striæ. Thorax compressed behind, the sides of mesothorax abrupt and margin angulate; separation of scutel and mesothorax obsolete. Node subquadrate, abrupt before, as high as next segment, not as wide; first segment as large as the second, margin of all the segments indistinctly ferruginous. Tergum dull, shining, without punctures or striæ. Spines of four hinder tibia simple, those of the anterior pair pectinate. Claws simple. (One specimen.) This may prove to be the worker of *P. Montezumia* Smith.

***Pseudomyrma thoraicea* Norton (nov. sp.).**

Worker. Length, 0.25 in. Color, ochre-yellow, with the final segments of abdomen banded with fuscous, and the femora and tibiæ blackish in the middle. Eyes large; ocelli fuscous, mandibles tipped with black, strongly denticulate within, the first largest. Head once and a half times wider than thorax, slightly emarginate behind. Thorax flattened above; metathorax subquadrate, declivity abrupt, margins of sides almost angulate, a slight tubercle on each side near the front. A blunt tooth near the apex of first node beneath and near the base of the same. Abdomen with fuscous spots, on the hinder segments with blackish bands. The femora and tibia, except at base and apex, blackish. Claws bifid. (Ten specimens.)

***Pseudomyrma bicolor* Guérin.**

GUÉRIN, Icon. Rég. anim. III, 427. Brazil, Panama, Mexico.

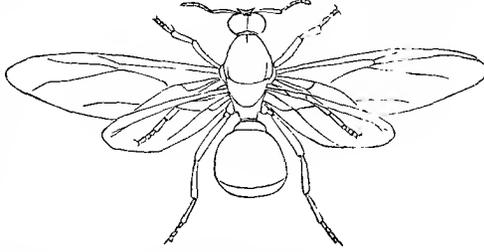


Worker. Length, 0.30 in. This is quite variable in color. The specimens examined are black, with the antennæ except lower half of scape, the prothorax, first node, and legs below the knees yellow-red.

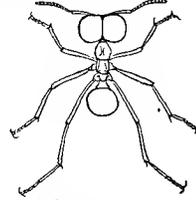
***Cecodoma Mexicana* Smith.**

SMITH, Brit. Mus. Cat. Hym. Vol. VI, p. 185.

Female. Length, about 1.00 in. Exp. wing, 2.00 in. Thorax one half wider than head, hairy, without spines; side angles of second node acute; color dark ferruginous; wings smoky yellow; costal margin blackish.



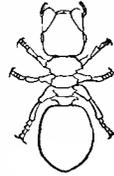
Worker major. Length, 0.50 in; *Worker minor*, 0.15 in. A spine on each lobe of back of head. Two spines on thorax before; two projections between and two spines on metathorax; a spine on pleura, above the anterior coxæ. Mandibles with about eight teeth; color, dark ferruginous; color of minor worker yellow-red.



Worker major.

***Cryptocerus multispinosus* Norton (nov. sp.).**

Worker major. Length, 0.27 in. Color black, the head and whole body dull with sparse coarse punctures, from each of which arises a short shining white hair. The produced sides of face, the anterior angles of thorax, tips of all the spines and anterior corners of abdomen testaceous. Margins of head and of cheeks each angular, partly covering the eyes, and extending forward above in a sort of scale as far as the margin of nasus, making the head nearly as wide before as behind; nasus and back of head emarginate; corners of head angulate, two spinose tubercles on the occiput, which has an abrupt declivity to hinder margin. Antennæ short, setaceous, base testaceous. Thorax twice as wide before as behind, emarginate in middle, with two spinose angles on each side, with a raised subangulate transverse connection; a



short blunt spine on each side of middle lobe; metathorax contracted behind, with a strong angle at its upper corners, its concavity without setæ; each node transverse, with a sharp spine, curving backward on each side, those on second node longest. Abdomen subcordate. Legs short, stout, black; tips of femora, tibiæ, and final tarsal joint testaceous, or yellowish horn-color.

Worker minor. Length, 0.20 in. This has the tubercles on occiput subobsolete, and the declivity behind less abrupt; the anterior angles of thorax nearly coincident, with no transverse connection.

II. *On the Phalangeæ of the United States of America.*

BY HORATIO C. WOOD, JR., M. D.

[Communicated December 9, 1867.]

INTRODUCTION.

THE PHALANGEÆ, or *Opilionina*, as they are sometimes called, are a suborder of the Trachean Arachnids of the same rank as the Pedipalpi of the Pulmonary Arachnids.

The external skeleton, the *tegument*, contains chitine, as does indeed that of all the arachnids, remaining firm although becoming transparent, when the animal is soaked in a solution of caustic potash. It is variously ornamented with tubercles or spines, and more rarely punctated or excavated. Good specific characters can frequently be drawn from it.

The cephalothorax and abdomen are closely fused together, although in most cases the line of separation is more or less distinct. The cephalothorax is never, at least in any species the author has seen, at all segmented; it is generally smaller than the abdomen, but in the family *Gonyleptidæ*, it is expanded into a broad plate, entirely overshadowing the very small abdomen. The latter is in all the *Phalangeæ* more or less distinctly segmented.

Near the centre of the cephalothorax is a more or less prominent abrupt elevation or large tubercle, upon which the eyes are situated. This tubercle, or as I have called